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A Contribution to the Knowledge of the Flora of Japan.

(Continued from p. 16.)

By

Tomitarô Makino.

Rhododendron Komiyamae MAKINO, Three Pl. New to Jap. (1925), p. 1.

A deciduous shrub, numerous and densely branched; branches short, terete, sepiceous-umber; branchlets commonly 3-5-verticillate, erect-patent, unequal in length, terete, glivous-brick-coloured or dark-brick-coloured, hirsute with appressed straight hairs, those of this year appressedly white-hirsute, provided with rusty or yellowish-viridescent, thin, obovate, obtuse, deciduous scales at the base. Leaves small, crowded at the top of branchlets, shortly petiolate, elliptical-lanceolate, oblanceolate or angustately obovate, mucronato-acute at the apex, cuneate at the base, entire and appressedly white-ciliated on margin, green and rather thinly pubescent with appressed drab hairs (which are dense on the midrib and veins), chartaceous, about 7-28 mm. long and $2\frac{1}{2}$ -11 mm. wide in the flowering time; midrib prominent beneath; veins 2-3 on each side, ascendingly erect-patent; petiole short, densely hirsute with appressed pale hairs, about 1-2 mm. long; the summer leaves small, linear-spathulate. Flowers pedicellate, usually 3- rarely 2- or 4-umbellate on the top of branchlets, appear with young leaves, faced laterally, sub-zygomorphous, lilac-purple, 2-3 cm. across; pedicels erect-patent, densely appressed-pilose with

drab hairs, 4-10 mm. long. Sepals 5, small, green, ovate to ovato-orbicular, obtuse, densely or rather thinly pilose with white appressed hairs externally, glabrous internally, ciliated, 2-4 mm. long. Corolla infundibuliform; tube short and campanulate; lobes 5, rounded or retuse at the apex, the posterior 3 oval or rounded-oval, the anterior 2 elliptical. Stamens 10, unequal, the longest ones equal to the corolla in length; filament declinate, curved upwards above, filiform, white-glandular towards the base; anther oval. Style exerted, longer than the stamens, declinate, arcuate upwards, glabrous, with a thick stigma; ovary ovoid, densely hirsute. Capsule about 6-7 mm. long; valves 5, broadly subulate, hard, pilose dorsally.

Nom. Jap. *Ashitaka-tsutsuji*.

Hab. Prov. SURUGA: Mt. Ashitaka (TOMITARÔ KOMIYAMA!; TAKETARÔ SAWADA! June 10, 1925.)

This species is very closely allied to *Rh. tosaense* MAKINO, but differs chiefly from the latter by the number of the stamens. I have named this new *Azalea* in honour of Mr. TOMITARÔ KOMIYAMA, who first found it. For the materials my shanks are due to Mr. TAKETARÔ SAWADA of Hakone, prov. Sagami.

***Polygala Reinii* FRANCH. ET SAV. var. *angustifolia* MAKINO, nov. var.**

Leaves oblong-lanceolate or angustately oblong, acute or acuminate at the apex, about 7-16 cm. long, 2-4½ cm. broad.

Nom. Jap. *Nagaba-kalcinohagusa*.

Hab. Prov. KII: Kôyasan (YOSHIMI NUMAJIRI! June 11, 1922.)

***Pycnostelma paniculatum* (BUNGE) K. SCHUM. var. *latifolium* MAKINO, nov. var.**

Leaves oblong-lanceolate or lanceolate, angustato-lanceolate in the superior ones, the broadest one attaining about 3 cm. in width.

Nom. Jap. *Hiroha-suzusako*.

Hab. Prov. KII: Kamihaya in Nishimuro-gôri (NUIZÔ UI! May 1914.)

***Aster Ohtanus* MAKINO, nov. sp. (Fig. II.)**

Perennial, about 3½-4½ decim. in height; rhizome short, more or less thick. Stem erect, slender, angulate, glabrous, viridescent. Leaves alternate, loosely arranged, petiolate, but sessile or nearly so in the superior ones, lanceolate or angustately lanceolate, acuminate with a callosa-acute tip, narrowly cuneate below, remotely mucronately callosa-denticulate, thickly chartaceous, green and scabrous on margin in the upper surface, paler and very thinly hairy beneath, about 6-12 cm. long including the petiole, about 7-12 mm. broad, diminished in size and passed into the bracts in the inflorescence; midrib slender, prominent beneath, often slenderly impressed above when dry; veins very loose, ascending; veinlets laxly reticulated beneath. Cyme terminal, few to subnumerous-flowered, laxly ramose with the erect-patent slender branches with bracts and minute bracteoles. Heads laxly disposed, long-

pedicellate, about 2 cm. in diameter, white. Involucre 4 mm. long, shortly campanulate, green; scales imbricate, the outer ones short and elliptical-ovate, obtuse, sub-carinate dorsally, the middle ones oblong or narrowly oblong, obtuse, the inner ones oblong-lanceolate or linear, acute or acuminate, all herbaceous and with scarious ciliated margins. Ray-flowers several, patent; ligules linear-oblong. Disk-flowers many, yellow. Pappus pale. Achenium narrow, appressedly pale-pubescent, about $3\frac{1}{2}$ mm. long.

Nom. Jap. *Kishû-giku*.

Hab. Prov. KII: Doro-hatchô, on rocks (UMATARÔ ÔTA! Oct. 1922 and Sept. 1924; TOMITARÔ MAKINO! Sept. 8-9, 1924.).

This species is closely allied to *Aster rugulosus* MAXIM., and yet they grow at quite different localities. The name *A. Ohtanus* is for the memory of Mr. UMATARÔ ÔTA, Teacher of Natural History in the Girls' High School of Shingû, prov. Kii.

Serissa foetida LAM. var. *pleniflora* MAKINO, nov. var.

Flowers small, double with multiple corollas.

Nom. Jap. *Yae-hakuchôge*.

Hab. Prov. KII: Inari-mura, cult. (T. MAKINO! Sept. 24, 1924.).

var. *duplex* MAKINO, nov. var.

Flowers with the duplicate corollas.

Nom. Jap. *Futaezakî-hakuchôge*.

Hab. JAPAN, cultivated.

Randia densiflora BENTH.
forma *angustifolia* MAKINO, nov. f.

Leaves lanceolate or broadly lanceolate, long-acuminate at the apex, gradually cuneate at the base, more or less crispate on margin, 6-14 cm. long including the petiole, $1\frac{1}{2}$ -3 cm. broad.



Photo. by U. Ôta in Doro, prov. Kii, Sept. 8, 1924.

Fig. II. *Aster Ohtanus* MAKINO.

Nom. Jap. *Hosoba-misaonoki*.

Hab. Prov. KII: Higashitonda-mura in Nishimuro-gôri (N. Ur! May 29, 1921.).

***Pirus hidaensis* MAKINO, nov. sp.**

Tree. Pome not large, long-pedicellate, pyriform, about 2½-3 cm. long, bright yellow when mature, smooth, sprinkled with minute sooty spots.

Nom. Jap. *Heishi-nashi*.

Hab. Prov. HIDA: Takayama, cult. (T. MAKINO! 1924.).

***Solanum nipponense* MAKINO, nov. nom.**

Solanum Dulcamara var. *heterophyllum* MAKINO in Bot. Mag., Tokyo, XXIV. (1910), p. 19.

Nom. Jap. *Yama-horoshi*, *Hosoba-no-horoshi*.

Hab. JAPAN.

***Elaeagnus Numajiriana* MAKINO, nov. sp.**

A shrub or small tree, deciduous, numerous-branched, the largest one attaining about 7 m. in height with the trunk 1½ decim. in diameter. Branches griseo-fuliginous; branchlets closely and densely covered with dark-brown scurfs or fulvous and gilvous scurfs; those of this year covered with bay scurfs. Leaves alternate, petiolate, oval-ovate or ovate, attenuato-acuminate with an obtuse or acutish tip, rounded or truncato-rounded at the base, entire, green and thinly scattered with minute pale scurfs above, argentate with pale scurfs, thinly mixed with cinnamon scurfs, which are denser on the midrib, chartaceous, 1½-5½ cm. long, ¾-2⅔ cm. broad; petiole 2-6 mm. long, canaliculate in front. Flower pedicellate, mostly 1 sometimes 2, axillary on the lower portion of the branchlets of this year, pendulous, covered with scurfs as is the pedicel. Calyx about 9-11 mm. long; the lowest part which is closely enclosed the ovary within much narrowed and fusiform or cylindrical-fusiform in form; the tube campanulato-cylindrical; lobes 4, patent, ovato-rounded, acute at the apex, 3½ mm. long; pedicel 4-8 mm. long. Stamens in the throat of the calyx. Style slightly exerted. Pseudo-Drupe small, ellipsoid, scattered with minute pale scurfs on the whole surface, red in mature, 8 mm. long; pedicel gracile, gradually enlarged above, about 2½ cm. long.

Nom. Jap. *Kôya-gumi*.

Hab. Prov. KII: Mt. Kôyasan (T. MAKINO! sterile; YOSHIMI NUMAJIRI! flowers and fruits.); Prov. ISE: Mt. Komono (T. MAKINO!).

This was first found and collected by me several years ago. Afterwards the materials in flower and fruit were kindly sent to me by Mr. YOSHIMI NUMAJIRI, Teacher of the Kôya Middle School, and in his memory I have named this new species.

(To be continued.)